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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
07/910,133	07/14/93	HEIKKILA H	85940/11

EXAMINER
NAFF, D

ART UNIT	PAPER NUMBER
1808	

18M2/0916

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DATE MAILED:
09/16/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 6/24/96 ☒ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☒ Claims 1, 3–13, 15, 16, 19 + 20 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☒ Claims 2, 14, 17 + 18 have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1, 3–13, 15, 16, 19 + 20 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

PTOL-326 (Rev. 2/93)

The amendment of 6/24/96 has been entered.

The amendment canceled claims 14, 17 and 18, and added claims 19 and 20.

Claims examined on the merits are 1, 3-13, 15, 16, 19 and 20 which are all claims in the application.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as the specification, as originally filed, does not provide support for the invention as now claimed.

The specification fails to contain support for hydrolysis as in claims 19 and 20. Applicants refer to page 6 of the specification as supporting these hydrolysis procedures. However, these two procedures appear to be intended to be used together as disclosed on page 6. There is no disclosure on this page of using one without the other. The first procedure alone does not produce monosaccharides and the second procedure alone does not have the capability of directly producing monosaccharides from cellulose raw material. Therefore, contrary to applicants' arguments, both procedures must be used together since monosaccharides are required for fermentation by the yeast.

Claims 19 and 20 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

Claims 11 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is confusing and unclear by depending on canceled claim 2.

Claims 1, 3-13, 15, 16, 19 and 20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Heikkila et al('026)(equivalent of WO 90/08193).

Applicant's arguments filed 6/24/96 have been fully considered but they are not deemed to be persuasive.

Applicants urge that in Heikkila et al the yeast reduce xylose to xylitol whereas in the claimed procedure two products are produced, i. e. xylitol and ethanol by conversion of xylose to xylitol and hexoses to ethanol, and this results in more efficient use of the starting materials.

This argument is unpersuasive since Heikkila et al disclose removing ethanol by distillation (col 5, lines 18-19) and the ethanol could be a useful product. While the ethanol may be produced in a relatively small amount, a significant amount could be produced if fermentation on a sufficiently large scale is carried out. For example, in Table II in col 7, about .0085% ethanol can be produced. For a batch of 1000 liters, about 8.5 liters of ethanol would be produced. Even a small amount of

ethanol can be significant when only a small amount is needed. The present claims do not require producing a certain amount of ethanol and the amount produced could be that produced in the process of the reference. While the starting material in the claims may contain hexoses, the starting material of Heikkila et al also contains hexoses (col 4, line 30). The amount of hexoses being small in the process of Heikkila et al, does not make the claimed invention unobvious since the claims do not require a larger amount and the claims encompass the same amount.

Claims 1, 3-13, 15, 16, 19 and 20 are rejected under 35 U.S.C. § 103 as being unpatentable over Heikkila et al for reasons set forth in the previous office action of 1/24/96.

The response to arguments above also applies to this rejection since this rejection has not been separately argued.

Claims 1, 3-13, 15, 16, 19 and 20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-28 of U.S. Patent No. 5,081,026(Heikkila et al). Although the conflicting claims are not identical, they are not patentably distinct from each other because of reasons set forth in the 103 rejection above as specified in the previous office action.

Contrary to applicants' argument, making a 102 and/or 103 rejection does not preclude double patenting which is not based on 102 or 103 but is based on preventing an extension of

monopoly. Double patenting is proper when there is a common inventor and/or assignee, and the present application has a common inventor with Heikkila et al. While double patenting must be based on the claims of the Heikkila et al patent, the patent claims provide sufficient disclosure to make the present invention obvious.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Naff whose telephone number is (703) 308-0520. The examiner can normally be reached on Monday-Thursday and every other Friday from about 8:30 AM to about 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, a message can be left on voice mail.

The fax phone number is (703) 305-7401.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

DMN
September 13, 1996

DAVID M. NAFF
PRIMARY EXAMINER
ART UNIT 182